



## 2002 South Dakota Report

### Natural Resources Conservation Activities



"The new Farm Bill represents the largest investment in conservation on America's working lands in Farm Bill history - \$13 billion over six years. The Farm Bill provides a great deal of flexibility for America's farmers and ranchers. Funding increases in all programs offer more farmers and ranchers more options for addressing their natural resource challenges."

--Bruce I. Knight, Chief, NRCS

## Land, Water and People

# People in Partnership for a Healthy Land



## The Natural Resources Conservation Service (NRCS) works hand-in-hand with the American people to conserve natural resources on private lands.

NRCS employees serve all counties in South Dakota and work in close partnership with 69 South Dakota conservation districts and two tribal conservation districts. This partnership provides assistance to farmers and ranchers in applying conservation practices to the land.

Approximately 236 NRCS members in 74 offices ensure all landowners have

accessibility to services and programs offered by the agency.

In addition to agency members and district employees, NRCS Earth Team volunteers assist in a wide variety of conservation efforts statewide. During 2002, 327 volunteers contributed over 4,300 hours.



## Technical Assistance for Conservation Planning

NRCS employees deliver technical assistance by providing landowners with one-on-one conservation planning assistance to assure the sustainability of South Dakota's natural resources. With NRCS's help, farmers and ranchers are equipped with conservation practices that reduce soil erosion, improve water quality, and enhance forestland, wetlands, grazing lands and wildlife habitat. Additional assistance helps individuals and communities restore natural resources after floods, fires, or other natural disasters.

Individuals and communities receive one-on-one technical assistance from a multi-disciplinary staff, which includes soil conservationists, engineers, soil scientists, biologists, rangeland management specialists and agronomists. The staff works together to ensure that the landuser receives the latest science-based technology and up-to-date natural resources information available for conservation on private lands.

NRCS conservationists present program options to landowners during the planning process. The outcome of technical assistance is often measured by conservation practices applied to the land. However, the actual number of landowners receiving conservation planning assistance

is significantly higher than those receiving allocated cost-share funds. For example:

- ♦ Eastern South Dakota lies in the Prairie Pothole Region. Within a single tract of land there can be more than 100 wetlands. NRCS provides technical assistance to help producers remain in compliance with the Wetlands Conservation provisions of the 1985 Food Security Act, as amended.

- ♦ Because of the severity of the 2002 drought, the Emergency Conservation Program (ECP) was implemented by the Farm Service Agency (FSA) and required technical assistance from NRCS staff. In 2002, South Dakota NRCS employees acted on 6,411 ECP referrals from FSA for NRCS technical assistance.

- ♦ NRCS is focusing nutrient management technical assistance efforts by strengthening state and private partnerships including statewide projects such as joint exhibits for producers and the public, joint training sessions and increasing the transfer of technology.

- ♦ In FY 2002, the Agricultural Nutrient Management Technical Assistance Team, developed 73 preliminary and follow-up nutrient management plans, 24 engineering designs and 13 systems were constructed and certified.

## Conservation on the Land

Numbers tell the story when it comes to planning and implementing conservation practices in South Dakota. Last year, **NRCS professionals**, in concert with our partners, **fielded over 87,000 requests for technical assistance** which resulted in **over 1.7 million acres of land with improved conservation.**

## SD Leads Nation in No-till Acre Increase

South Dakota led the Nation in no-till acres with an increase of approximately 10 percent across the state in the past two years.

NRCS provides agronomic technical assistance to producers as they formulate their crop rotations. Residue management is a key component in conservation planning.

In 2000, one out of every five cropped acres in South Dakota was involved in a no-till farming system. In 2002, that increased to one out of every four. This roughly equates to an increase of one million acres under no-till in a two-year period.

Overall, 30 percent, or approximately 4 million, of all cropland acres in South Dakota is involved in the no-till system.

A no-till farming system is one form of residue management that assists in preventing soil erosion due to wind and water. It is also key in keeping moisture in the soil profile, which is so critical in drought years.

Deterring soil erosion prevents waterways from filling and eventually becoming clogged with sediment. This is a major concern in South Dakota where the streams and creeks involved in watersheds feed into shallow prairie lakes.

Losing critical topsoil to erosion is not a problem that is easily remedied. It takes approximately 500 years for nature to produce one-inch of topsoil.

## More Than Customers Benefit

Ultimately, every person who drinks water and eats food benefits from NRCS' work. These benefits translate beyond a landscape into benefits to communities. Every dollar NRCS invests in technical and financial assistance to improve natural resources triggers a \$5.13 stimulus to South Dakota's economy.

## NRCS Mission

*The Natural Resources Conservation Service provides leadership in a partnership effort to help people conserve, maintain, and improve our natural resources and environment.*

## NRCS Vision

*A Productive Nation in Harmony with a Quality Environment*



**Soybeans planted in corn residue.**

Other forms of conservation tillage taking place in South Dakota include mulch-till and ridge-till. When the conservation tillage practices applied in South Dakota are combined, three out of every four acres cropped in the state are involved in residue management.



# Program Summary - South Dakota

NRCS employees work in every county and with the seven American Indian tribes in South Dakota. They are range conservationist, soil conservationists, engineers, geologists, agronomists, and soil scientists who work hand-in-hand with land users to conserve natural resources on private lands. This is the foundation of our conservation programs and we are committed to providing training and support to meet the changing challenges in natural resource management.

## Environmental Quality Incentives Program (EQIP)

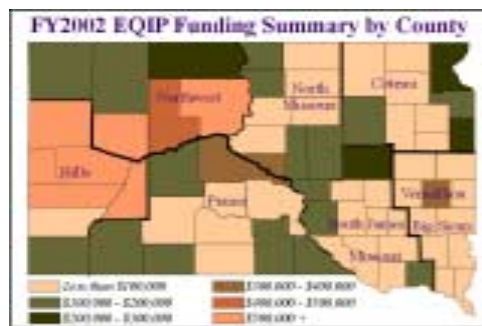
EQIP is a voluntary conservation program that provides technical and financial assistance to farmers and ranchers. It serves to address serious natural resource concerns by developing conservation systems for treatment.

The Farm Security and Rural Investment Act of 2002, commonly known as the farm bill, made sweeping changes to EQIP. With the passage of the bill in May 2002, NRCS in South Dakota has worked with nearly 700 applications to bring them in line with the new rules. NRCS is also working with additional individuals who previously were not eligible

to participate in EQIP.

In South Dakota, Environmental Quality Incentives Program (EQIP) is NRCS' most sought after program. In 2002, almost 700 applications were submitted requesting more than \$22 million in funding. The South Dakota 2002 allocation for EQIP financial assistance was about \$8.7 million. This funding resulted in contracts for 253 applications putting conservation practices on 653,088 acres.

Since 1997, South Dakota farmers and ranchers have received about \$27 million in financial assistance through 1,513 contracts



for installing conservation practices to address natural resource concerns.

## Wildlife Habitat Incentives Program (WHIP)

WHIP is a voluntary program that helps landowners in South Dakota develop and improve wildlife habitat on private lands. Interested landowners seek help from NRCS and other federal, state and private organizations to develop conservation plans that improve wildlife habitat. The program was authorized by the 1996 Farm Bill and helps landowners develop habitat for upland

wildlife, wetland wildlife, threatened and endangered species, fish, and other wildlife in South Dakota.

South Dakotans have strong interest in WHIP. Though funding for the program was unavailable in 2000, producer interest made for a successful return in 2001 and 2002. In 2002, NRCS received 53 applications resulting in 52 funded contracts worth

\$392,864 and enrolling 9,245 acres.

Excellent wildlife habitat is one of South Dakota's natural resource treasures. To date, 380 WHIP contracts have been funded in South Dakota, encompassing 131,442 acres. Partnerships with other conservation organizations and groups enhance program accomplishments.

## Grazing Lands Conservation Initiative (GLCI)

The Grazing Lands Conservation Initiative (GLCI), through the NRCS, provides technical assistance to ranchers throughout South Dakota. This assistance ensures the producers will have the most current information, enabling them to get the most out of their grazing lands while pro-



tecting the soil, benefiting the environment and increasing their profits. Technical assistance was provided for prescribed grazing (acres applied) on 491,503 million acres of grazing land. Grazing demonstration projects, ranch tours, and workshops provide an educational platform for technology transfer.

Through GLCI, NRCS provides advice and recommendations to the South Dakota Grasslands Coalition. The seven member

board and association members across the state provide local input and a partnership for joint outreach projects such as grazing management seminars and pasture tours. The Coalition's Technical Assistance Project provided a site specific resource analysis and information on the latest grazing management technologies to 33 ranchers. It also established six grazing demonstration sites across South Dakota.

## CRP- Farmable Wetland Pilot Program

In June 2001, a Farmable Wetland Pilot Program was added to the continuous Conservation Reserve Program (CRP) to offer

landowners an alternative for managing wet areas. Small wetland areas (under five acres in size) are eligible. The wetland must include

a filter strip to qualify. During Fiscal Year 2002, South Dakota had enrolled 10,071 acres in 700 contracts.

## Conservation Tree Plantings Break State Record



The 2002 planting season surpassed the 2001 record by a wide margin. South Dakota reports planting 10,233 acres of windbreaks and shelterbelts with over 4 million trees.

Trees are planted across South Dakota by each of the 69 local conservation districts while NRCS employees provide technical assistance in the design and planning of windbreaks and shelterbelts. Since 1944 when districts started keeping tree planting statistics, 193,594,097 trees and shrubs have been planted to prevent wind erosion, provide windbreaks for livestock and develop habitat for wildlife.

## NRCS Aids Fire Recovery



Emergency Watershed Protection (EWP) Program rehabilitation work on the forested areas burned by the Grizzly Gulch Fire in the Black Hills included 144 acres of contour felling conservation practice and 103 acres of aerial seeding. The contour felling was installed to deter erosion by water on the severely burned areas with less than 50 percent slope.

### Resource Conservation and Development (RC&D)

RC&D councils are comprised of volunteers who are local citizens, county and local government representatives and members of other interested organizations. Developing new partnerships and expanding programs were the focus in 2002. **The seven South Dakota RC&D's leveraged close to \$10 million worth of project funding for community development, economic development, and natural resources enhancement projects.**

Specifically, the 2002 direction was assisting communities throughout South Dakota RC&D areas to improve their services through wellness and recreation centers,

Firewise Workshops, welcome centers, and business creation. Other programs of significance included partnerships with the U.S. Fish and Wildlife Service to provide ranchers and farmers with additional water resources, grassland management demonstrations and workshops, Missouri River/Lewis and Clark Lake watershed assessments, and Missouri River sedimentation and bank erosion demonstration projects.

The reputation of South Dakota RC&D's to "get things done" is sparking new interest from non-RC&D communities, leading to the development and application for a new



RC&D area in South Dakota. Dakota Central RC&D in northeastern South Dakota has completed the application process and is waiting for approval from the USDA Secretary of Agriculture. Southeastern South Dakota counties and communities have started an application for an RC&D area.

### Wetlands Reserve Program (WRP)

In 2002, NRCS of South Dakota received **14 applications for permanent easements and 4 applications for 30-year easements.** All applications were approved, involving **more than 2,000 acres while obligating \$1.1 million.**



The easement value in South Dakota is based on soil productivity ratings to achieve the fair market agricultural value according to property taxation procedures. South Dakota makes WRP funding decisions at least twice a year. The interest in easements remains high. The majority of requests come from a 25-county area in eastern South Da-

kota known as the "Prairie Pothole Region." This area provides excellent nesting and habitat cover for waterfowl. Additional benefits to landowners and society include reduced flooding and improved water quality.

Since 1997, more than 33,000 acres in South Dakota have been enrolled in WRP through 369 permanent and 30-year contracts.

### Floodplain Easements (FPE) - Emergency Watershed Protection Program (EWP)

South Dakota offers floodplain easements to landowners as a way to provide a more permanent solution to repetitive disaster areas while achieving environmental benefits. **In 2002, NRCS received 13 applications resulting in 3 approved contracts involving 201 acres and \$183,687.**

Producers in South Dakota have received more than \$10 million for perfected easements. Under EWP-FPE programs in South Dakota, almost 46,000 acres have been enrolled since 1993.

Because of the extent of the flooding in northeastern South Dakota in the 1990s, the

Emergency Watershed Protection Program (EWP) has been popular with landowners. Many areas were underwater for several years. Basically, there has not been crop production on this area, and EWP is a way to protect the resource and generate some income for the landowner.

### Conservation Reserve Program (CRP)

CRP encourages farmers to convert highly erodible cropland or other environmentally sensitive acres to long-term vegetative cover, such as tame or native grasses.

For all contracts offered, NRCS provides nearly all the technical assistance determining

the land eligibility, suitability of the practices, and predominant soil types for the eligible acres offered. NRCS also develops a conservation plan of operations with the producer that is approved by the local conservation district.

USDA's Farm Service Agency and the

Commodity Credit Corporation administer CRP and issue the rental payment checks. At the end of FY 2002, **South Dakota had 13,698 active CRP contracts encompassing 1,294,590 acres across the state.** The contracts have a value of \$52.4 million with the average annual payment being \$40.48 per acre.

### Continuous CRP

Landowners can sign up for high priority conservation practices at any time through continuous CRP. The most popular "buffer" practices are wildlife plantings, shelterbelts, field windbreaks, filter strips, grassed waterways, riparian buffers or cross wind trap

strips. Since the Conservation Buffer Initiative began in 1996, there are 8,003 contracts on more than 136,060 acres in continuous CRP across South Dakota. Over the past four years these small parcels of land (averaging 6-7 acres per contract) have shown

multiple environmental benefits including cleaner water and improved wildlife habitat. **Program year 2002 producers entered 15,494 acres in 2,177 contracts with the annual rental payment of those acres valued at \$872,932.**

## Soil Survey and Technologies

Soil surveys provide a field-based scientific inventory of soil resources, including soil maps, data about the physical of chemical properties and soils, and information on potentials and limitations of each soil. NRCS is the Federal agency responsible for the soil mapping of private lands.



South Dakota has published soil surveys for all of its 66 counties except one. These surveys are available at no cost to the landowner and contain information on soil characteristics, potential and limitations.

Forty-four soil surveys in South Dakota are digitized to meet Soil Survey Geographic Database (SSURGO) standards. Fourteen are currently in the certification process, while other counties are awaiting funding for recompilation and digitizing.

South Dakota State University is working closely with NRCS to complete the digitizing process by the end of 2003 with contributions of staff and other resources.

### National Resources Inventory (NRI)

The NRI is a statistically based sample of land use, natural resource conditions, and trends on private lands in the United States. NRCS had conducted an inventory every five years from 1982 to 1997. Now about 20 percent of the inventory is compiled every year which spreads out the workload. In 2002, over 1,321 sample units were documented in South Dakota. A sample unit is typically 160 acres of land with three points identified by global positioning systems. NRI tracks the changes in natural resources data like land cover and use, irrigated and non-irrigated cropland, wildlife habitat diversity, erosion and wetlands.



## NRCS Resources on the Web

NRCS has provided many new technical tools and data to clients, partners and the public. Information that previously required a trip to local offices is now available through state and national web sites. This effort helped provide program information to clients and standards and specifications to contractors and engineers. Digital data and web sites have streamlined farm bill information and transfer.

**USDA NRCS** - <http://www.nrcs.usda.gov>

**2002 Farm Bill** - Up-to-date information on new developments of the farm bill and programs available. <http://www.nrcs.usda.gov/programs/farmbill/2002/>

**eFOTG - The new electronic Field Office Technical Guide** contains all of NRCS' science-based agronomic and engineering standards and specifications for conservation practices in South Dakota and the Nation. Landowners, technical service providers, conservation planners, students and others can use the material on their home, school or office computers. The data will be updated electronically on a regular basis. <http://www.nrcs.usda.gov/technical/efotg/>

**PRMS - Performance Measurement Results System** is an online database that generates reports on conservation progress and accomplishments by county. <http://prmsreports.nrcs.usda.gov>.

**e-GOV** - The Service Center Agencies, including Farm Service Agency, Natural Resources Conservation Service and Rural Development, provide several services online. <http://forms.sc.egov.usda.gov/eforms/default1.htm>

**NRI - The National Resources Inventory** provides data and indicators of our nation's natural resources. <http://www.nrcs.usda.gov/technical/NRI/>

**NRCS Photo Gallery** - Natural resources and conservation related photos from across the USA are available online. <http://photogallery.nrcs.usda.gov/>

**Soils** - The soils web site is dedicated to helping people understand soils. It delivers information from introductory and student materials to highly technical applications and interpretations of soils information for private landowners or land managers for conservation and community planning. <http://soils.usda.gov>

**PLANTS Database** - Standardized information about plants focusing on vascular plants, mosses, liverworts, hornworts, and lichens of the U.S. and its territories. The PLANTS Database includes names, checklists, automated tools, identification information, species abstracts, distributional data, crop information, plant symbols, plant growth data, plant materials information, plant links, references, and other plant information. <http://plants.usda.gov/>

**Technical Service Providers** - The 2002 Farm Bill authorized USDA to use Technical Service Providers (TSPs). The premise behind TSPs is that the demand for assistance to do conservation work is increasing and will exceed the current staffing capacity of NRCS and conservation districts. <http://techreg.usda.gov>.



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